

Annex 2

PRACTICAL REFERENCE FOR ACTIVITIES IN EARLY CHILDHOOD

Physical Activity

Physical activity for early childhood refers to any activity that gets children moving. All activity counts! This guide provides examples of activities that children in the early years can participate in to accumulate physical activity time throughout the day.

For infants (0 to <1 year), physical activity includes tummy time and floor-based play that are appropriate for their developmental milestones. For toddlers (1 to <3 years) and preschoolers (3 to <7 years), physical activity should include a **wide variety of movement experiences**, in **different environments**. This involves activities both **indoors and outdoors**, which take place in various settings **in school and out of school**. **Daily outdoor active play** is highly encouraged as it provides opportunities for toddlers and preschoolers to develop **fundamental movement skills** and to explore their environment.

Types of Physical Activities for Infants

For infants, physical activity includes being carried in an upright position, reaching up to swipe and swat toys when lying in supine, elevating legs off the surface to kick, play in side-lying, rolling from back to tummy and reverse, tummy time, reaching across the body to play when in sitting, crawling, pulling to stand and cruising along furniture. These activities are encouraged on a firm surface and gradually progressed to dynamic surfaces as the infant becomes more confident with the skill. Many of these activities can be incorporated into day-to-day caregiving activities.

It is especially important to remember to limit the number of hours that infants spend in containers or being restraint e.g. rockers, strollers that inhibit their freedom of movement. When infants are allowed to move, they are able to discover their bodies, explore their environment and this further motivates them to learn and move.

Activities	Tips for parents/caregivers
Carried in an upright position (this works on infant's head and trunk control)	<ul style="list-style-type: none">• Try carrying infant over your shoulder when burping them after milk time.• At two months, carry infant facing out, you can allow infant to rest the back of their head against your chest if still wobbly, when more stable, slide infant's buttocks up your chest so that their head is not touching your chest. If you use a carrier, face them out when awake.
Reaching up to swipe and swat	<ul style="list-style-type: none">• After changing infant's nappy, when lying on their back, allow infant the opportunity to reach up to swipe and swat at toys. Start with 1-2 minutes and gradually progress to 5-10 minutes.• If infant is unable to reach upwards, used a folded blanket under infant's shoulders and upper arm, one on each side.
Elevating legs off the surface to kick	<ul style="list-style-type: none">• After changing infant's nappy, dangle a toy at infant's feet and encourage upward kicking of legs.• You may fold a blanket and place under infant's buttocks. This will further help to engage infant's core muscles during kicking.
Play in side-lying	<ul style="list-style-type: none">• When infant is awake, perhaps whilst getting their milk ready or doing your household chores – place infant on a firm surface,

(to engage the side abdominal muscles - obliques)	lying on their side. You may use a bolster or a rolled bath towel behind their back to prevent them from rolling back. Use a book, contrast cards, or a small toy in their hand to engage them. Alternate sides.
Rolling	<ul style="list-style-type: none"> • When changing infant's nappy, instead of lifting legs up, bend infant's hips and knees up to 90 degrees and roll infant to the side to remove the soiled nappy. Then back again when placing the new one.
Reaching in sitting	<ul style="list-style-type: none"> • Once infant can sit independently for a few seconds, try placing their favourite toy in front of them so that they reach for it. Progress this by then placing the toy at the sides, encouraging them to reach across their body to get the toy. Consider a cause-and-effect toy or a container where they can put things into and take them out.
Crawling	<ul style="list-style-type: none"> • Crawling is initially best practiced on a firm play mat. Ensure the environment is safe and large enough to promote exploration. • Progress crawling to varied surfaces and then over pillows and cushions.
Pulling to stand	<ul style="list-style-type: none"> • Start this activity where infant can grip onto something to pull self-up (e.g. cot rails). • Progress this to places where gripping would be harder (e.g. sofa or a wall).
Cruising along the furniture	<ul style="list-style-type: none"> • Start this activity where infant can grip onto something, use a toy to encourage side stepping along the furniture. • Progress by making small gaps between the furniture.

Tips on Tummy Time for Infants

- Your infant may start tummy time as soon as they are brought home.
- Place your infant on their tummy when they are awake, relaxed and rested. Place them on a firm surface like a mat or on your chest so that they may see your face. Start with 1-2 minutes per session and lengthen to 5-10 minutes a few times a day as your infant grows and becomes stronger. Face your infant whilst talking or singing to them. If they appear tired or distressed, roll them onto their backs for a rest and try again later.
- If your infant finds it consistently difficult to lift their head when in tummy time, use your hand to place on their buttocks, this can give them more stability and allow them to push up a little longer.
- When your infant is strong enough, they may try to roll over from their back to their tummy. You may place one or two toys on a firm surface around your infant to encourage this.
- You may place the infant's favourite toy just out of reach to encourage them to reach for or creep towards the toy.
- Make tummy time part of your infant's daily routine, for example for a short duration before or after diaper changes.

Types of Physical Activities for Toddlers and Preschoolers

Toddlers and preschoolers can be engaged in a wide variety of physical activities through a range of **fundamental movement skills (FMS)**. FMS underpin daily living activities and provide the foundation

for participation in sports and other forms of complex movement skills as the toddler/preschooler grow up. The early years are critical for establishing this foundation.

Parents/caregivers play an important role in enhancing the FMS of their toddler/preschooler at home and in school via facilitation, motivation and personal participation. Parents/Caregivers can also facilitate learning of FMS by providing simple cues, demonstration and playing with their toddler/preschooler.

FMS are generally categorised into three main themes:

1. **Locomotor Skills** refers to body movement from one location to another. Many locomotor skills are used daily (e.g. running after a bus, leaping over a puddle), in many games and sports (e.g. jumping up to catch a ball) and during active play (e.g. crawling through a tunnel or climbing in the playground). Other examples of locomotor skills include walking, sliding, hopping, and skipping.
2. **Object Control (manipulative) Skills** require the toddler/preschooler to control an object using part of the body or using an equipment. Object control skills involve:
 - Propulsive skills – Sending an object away (e.g. throwing or kicking a ball)
 - Receptive skills – Receiving an object (e.g. catching or dribbling a ball)
3. **Stability (non-locomotor) Skills** involve a toddler/preschooler in maintaining and/or attaining balance. Stability is a key element for every human movement and necessary for all locomotor and object skills. Examples of stability skills include static and dynamic balance, bending and curling, turning, twisting, and stretching.

(Source: Fun Start Move Smart!: Fundamental movement skills for growing active learners)

Other types of physical activities to encourage participation of preschoolers include swimming, cycling and other forms of modified sport.

Older preschoolers should progress towards participating in a range of physical activities that involve age-appropriate energetic play. They are recommended to carry out moderate to vigorous physical activity (MVPA) for 60 minutes, which is a third of the recommended total daily physical activities (PAs) of 180 minutes.

MVPA should include frequent periods of energetic and dynamic play, spread throughout the day. Moderate-intensity activity refers to activity that make the child breathe harder and heart beats faster than at rest or sitting, such as walking to and from school. For vigorous-intensity activity, a useful guide is to observe if the child is huffing and puffing during the activity, or is not able to say more than a few words without pausing to catch a breath, examples include, playing tag (running or chasing playmates), ball games, skating or rapid cycling. Across an exertion scale of 10, these activities will score about 7 or 8. Examples of MVPA for the preschooler will include, playing tag (running or chasing playmates), ball games, skating or rapid cycling.

In addition to MVPA, preschoolers should also incorporate muscle and bone strengthening activities. These activities require the preschoolers to bear and lift their own body weight to work against a resistance. Examples include running, jumping, climbing activities such as scaling playground obstacles, skipping rope, dancing and playing games such as hopscotch. Dedicated resistance or weight training regimes are not necessary.

Physical activities for the toddler and preschooler may be organised broadly into two categories: i) structured physical activity with planned objectives and focus, and ii) unstructured physical activity that allows for “free” and unguided play. Both genres are synergistic (i.e. deliberate vs. self-regulated way of achieving activity goals) and should be incorporated into the toddler’s/preschooler’s daily physical activity routine. For example, a Physical Education session with structured and unstructured play covers lesson for a preschooler to balance on a beam and freedom to play alone or with others at a playground.

Physical Activity Out of School		
Different Environments to engage in Physical Activity	Tips for Parents/Caregivers	Suggested Activities/Examples
At Home (Indoors)	Create a home environment that encourages movement and exploration	<ul style="list-style-type: none"> • Set up safe spaces for movement (e.g. an area for physical play) • Position furniture in a way that allows child to move freely and encourages movement around the house • House rules that encourage safe movement (e.g. a toddler is allowed to climb up and down low furniture or sofa) • Devote spaces in the house for active play (e.g. corridor for shuttle run, hopscotch, underarm rolling to a target) • Make accessible a bucket of foam balls of different sizes for children to play with • Paste pictures of favourite cartoon characters on the wall for child to aim and throw at • Hang balloon or streamers from the doorway to encourage child to jump, reach and strike • Set up obstacle course that incorporates various activities such as balancing, jumping, throwing and etc. for child to play and navigate around
	Make use of household/recycled material for activities	<ul style="list-style-type: none"> • Create an obstacle course or a fort with cardboard boxes, pillows, chairs, and bedsheets to crawl through or jump over • Rolled up socks, crushed newspaper or soft toys for throw and catch games • Make DIY equipment (e.g. paper plate and short stick as an implement to send and receive a balloon to and fro) • Masking tape on the floor to balance on the line (dynamic balance)
	Play with your child (parent-child games)	<ul style="list-style-type: none"> • Hide and seek and treasure hunt (use different locomotor skills) • Keep the balloon in the air with different body parts • Pillow fights • Simon Says • Animal movements • Alphabet poses • A game of Twister • Musical statue • Dance to music
	Involve child in household chores (even if a helper is available)	<ul style="list-style-type: none"> • Clean up after meals (e.g., bring plate back to kitchen or wipe the dining table) • Tidy the house (e.g., put toys/books back, return items after use) • Fold clothes and put it back in wardrobe

		<ul style="list-style-type: none"> • Water plants
On-the-go (Outdoors/Indoors)	Integrate as part of daily activity and commute	<ul style="list-style-type: none"> • Walk up and down stairs • Walk, cycle or scoot to and from school
Playground/Play gardens (Outdoors)	Make it a routine for child to visit the playground; Encourage unstructured play	<p>Playgrounds present numerous opportunities for children to explore and develop FMS. Some examples include:</p> <ul style="list-style-type: none"> • Balancing on a balance beam, a log or on an uneven surface • Climbing up a rock wall or rope ladders • Crawling through a tunnel • Jumping/hopping into coloured markers on the floor or on the trampoline • Sliding also involves stability skills such as bending, and transfer of weight to get down the slide
	Facilitate active play: Introduce games resulting in moderate to vigorous physical activity (MVPA)	<p>Introduce games with simple rules and play with your child:</p> <ul style="list-style-type: none"> • Create an obstacle course to challenge your child • Catching or Tag, Freeze-Tag, The Floor is Lava (use different locomotor skills)
Outdoor Spaces (e.g., basketball court, void deck, open spaces, grass fields)	Identify available outdoor open spaces in your neighbourhood for your child to participate in MVPA	<ul style="list-style-type: none"> • Games with simple rules: Catching or Tag, Freeze-Tag, What's the Time Mr Wolf? (use different locomotor skills) • Ball games (e.g. throw and catch, kicking, bat and ball, badminton) • Bubbles (run, jump and strike or catch) • Scooter, Cycle (tricycle, balance bike, two-wheel bike), Roller skate
Parks/ Nature Parks/Beach (Outdoors)	Immerse your child in a new environment to engage in active play over the weekend	<ul style="list-style-type: none"> • Nature walks or hike • Walk, run, jump, hop, skip bare feet on different surfaces (e.g., grass, sand) • Walk on uneven ground • Balance on logs • Build sandcastles • Water play/ Wade in the water

<p>Sport Facilities (e.g., stadiums, swimming pools, badminton courts, climbing gym) (Outdoors/Indoors)</p>	<p>Let your child experience a variety of sports according to his/her interest</p>	<ul style="list-style-type: none"> • Participating in a range of sports with an age-appropriate programme helps develop FMS. Some examples include: <ul style="list-style-type: none"> ○ Football ○ Athletics ○ Gymnastics ○ Basketball ○ Tennis ○ Hockey ○ Martial arts ○ Swimming ○ Rock climbing
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Physical Activity in School

As toddlers and preschoolers spend many hours in school on weekdays (especially those in childcare centres), preschool educators play a significant role in getting toddlers/preschoolers to be active in physical activity throughout the day. Besides classes that directly involve movement (e.g. Music and Movement, Motor Skills Development), educators should provide other opportunities for toddlers/preschoolers to increase body movements throughout the day. Some suggestions include:

- **Modifying the physical environment** to increase movement of the toddlers/preschoolers as part of their daily routine:
 - **Active Navigation Routes** – Design spaces and pathways linking different areas of the school using floor markers; install attractive signage to encourage toddler/preschooler to jump, hop, balance etc. to get from one part of the school to another.
 - **Active Play Corners** (e.g., Giant game board that gets toddler/preschooler to perform various FMS)
- Incorporate **movement as part of core curriculum** (e.g., numeracy with movement)
- Introduce **outdoor learning** or **MVPA in a different environment**
- Introduce **Brain breaks** after every hour of sedentary time or when toddlers/preschoolers are restless. This involves quick and simple activities to get toddlers/preschoolers out of their seats to move (e.g., stretching, action songs, animal movements)

Physical Activities within a Preschoolers' Day

There are many ways in which a preschooler is capable of fulfilling the physical activity recommendations on any given day. The following suggestions and examples aim to illustrate a typical school day and a weekend.

On weekdays:

- **Preschool:** Over 2 hours, 1 hour can be structured physical education class, and the remaining 1 hour covers other curriculum such as music or dance class, active involvement in story-telling
- **Home (1 hour)**
 - Playground after school (as part of daily routine, 45-60min)
 - Walk to school, climb up/down stairs (20min)
 - Active play at home.

On weekends

- Beach/Park (picnic, walking in nature, cycling); park connector
- Organised sport with modified games
- Playing at activity facilities (playground, water-park, beach)

Resources

Tummy time

1. <https://polyclinic.singhealth.com.sg/Documents/GrossMotorSkills.pdf>

Play activities for infants

1. <https://polyclinic.singhealth.com.sg/Documents/3month%20DA.pdf>
2. <https://polyclinic.singhealth.com.sg/Documents/6month%20DA.pdf>
3. https://polyclinic.singhealth.com.sg/Documents/12month%20DA_v2.pdf
4. <https://www.healthhub.sg/live-healthy/2030/activity-ideas-to-get-tot-moving>

Outdoor play for toddlers & preschoolers

1. <https://activeparents.myactivesg.com/activities/ap/lets-go-play-outside-5-unique-playgrounds-around-singapore-to-train-your-childs-fundamental-movement-skill>
2. <https://www.ecda.gov.sg/Educators/Pages/Outdoor-Learning.aspx>

ActiveSG programmes for preschoolers

1. www.myactivesg.com/programmes/academy
2. www.activeparents.myactivesg.com

Active screen-based physical activity for preschoolers

1. <https://raisingchildren.net.au/preschoolers/play-learning/screen-time-healthy-screen-use/screen-time-physical-activity>

Sedentary Behaviour

Parents, caregivers, and teachers can help young children to reduce their sedentary behaviour and to engage in active lifestyles. Consider the following:

Infant	<ul style="list-style-type: none">• Talk and sing gently to your infant whilst holding them. When talking, try using a changing tone of voice and vary your expressions.• Read books that have simple, repetitive words and clear pictures to your infant, especially those with rhymes or songs.• Stimulate your infant with toys that are colourful or make noise, encouraging them to reach out for the toy. Encourage your infant to explore toys of different textures (soft, hard, rough) for exploratory play. Household objects
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	<p>like cups, spoons or boxes can be used. Blocks are useful for open-ended play.</p> <ul style="list-style-type: none"> • Play peek-a-boo with your infant with your hands or another object like a book or napkin. • You may bring your infant outdoors to explore their surroundings. • When playing with your infant, follow their lead and change activities based on their needs. • Avoid restraining your baby in containers e.g. strollers and rockers for prolonged periods.
<p>Toddler</p>	<ul style="list-style-type: none"> • Playtime is a powerful way of showing love and connecting with your toddler. • Allow your toddler to take on unstructured, free play. It enables them to develop creativity and learn at their own pace. • A device cannot replace you. Your interaction with your toddler will benefit them extensively. • For toddlers >2 years old, if you allow screen time, consider setting consistent rules and limits (e.g. less than 1 hour of screen time per day). Ensure access to high quality educational programs for your toddlers • Co-view and share screen time with your toddler and talk about what he/she is watching. • Face-to-face interactions is much preferred, which include talking, reading and singing. • Avoid screen device use while eating meals, in the hour before bedtime, playing with toys or during family interactions. • Parents should be aware of their own screen usage and avoid using screens while spending time with your toddler.
<p>Preschooler</p>	<ul style="list-style-type: none"> • Active play and physical activity are important, and curb sedentary time when possible. • When sedentary behaviour cannot be avoided, break up extended periods of sitting or lying down with frequent breaks for movement. • Encourage a variation of postures and avoid sustained positions to avoid muscular aches and pain. • While sedentary, engage in interactive activities together, such as storytelling, playing games and singing. • Minimize the amount of screen viewing as much as possible. • If screen time cannot be avoided, set rules and boundaries and consider setting a family media plan for screen usage, ensure age-appropriate content, avoid screen device use while eating meals, in the hour before bedtime and playing with toys or during family conversations. • Remove TV's and other screen devices from the preschooler's bedroom. • Monitor media content and select high-quality programs appropriate to the preschooler's age, engage in conversations with the preschooler about the media content and co-view with them as much as possible. • Parents should be aware of their own screen usage and avoid using screens while spending time with your toddler.

Resources

Play activities for infants

1. <https://polyclinic.singhealth.com.sg/Documents/3month%20DA.pdf>
2. <https://polyclinic.singhealth.com.sg/Documents/6month%20DA.pdf>
3. https://polyclinic.singhealth.com.sg/Documents/12month%20DA_v2.pdf
4. <https://www.healthhub.sg/live-healthy/2030/activity-ideas-to-get-tot-moving>

Movement/Fun activities at home

1. <https://www.nuh.com.sg/our-services/Specialties/Paediatrics/Documents/Activity%20Resource%20Book%20-%20PLAY.pdf>
2. <https://www.nuh.com.sg/our-services/Specialties/Paediatrics/Documents/Movement%20activities%20at%20home%20for%20your%20child.pdf>

Advice about screen time

1. <https://www.nuh.com.sg/our-services/Specialties/Paediatrics/Documents/NUH%20CDU%20Screen%20Time%20E-Brochure.pdf>
2. <https://www.healthychildren.org/English/family-life/Media/Pages/Healthy-Digital-Media-Use-Habits-for-Babies-Toddlers-Preschoolers.aspx>
3. <https://childmind.org/article/media-guidelines-for-kids-of-all-ages/>
4. <https://raisingchildren.net.au/preschoolers/play-learning/screen-time-healthy-screen-use/managing-screen-time-3-11-years>
5. <https://raisingchildren.net.au/toddlers/play-learning/screen-time-media/screen-time>

Family media plan

1. <https://www.healthychildren.org/English/media/Pages/default.aspx>

Sleep

Parents, caregivers, and teachers can help young children to meet the sleep recommendations. Consider the following:

Infant	<ul style="list-style-type: none">• Set a consistent, calming bedtime routine to establish infant's sleeping behaviours. A regular pre-bedtime plan can include bathing, infant massage, swaddling and dimming lights.• Learn to look out for body language indicating tiredness and need for sleep (e.g. rubbing eyes, arching back and infant not focusing).• Put infant to bed while drowsy but not completely asleep. Avoid nursing infant to sleep after the first few months, to allow infant to learn to fall asleep independently.• If infant is unsettled, provide rhythmic patting to calm infant, but not to the point of sleeping.
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	<ul style="list-style-type: none"> • If infant remains restless, providing a pacifier may help. However, avoid carrying infant or rocking infant to sleep. • Provide infant opportunities to self soothe when he wakes up. Your infant might fuss or cry before finding a comfortable position and falling asleep. • Allow sufficient daytime naps, as infant may not sleep well at night if overtired.
Toddler	<ul style="list-style-type: none"> • Develop a bedtime routine that involves a wind-down period, which helps to relax and anticipate bedtime (e.g. reading a book, a relaxing shower, listening to music). • Avoid screen time (e.g. smart phones, tablets, and computers) 1 hour before sleep. • Avoid naps close to bedtime as it may prevent the toddler from falling asleep or staying asleep. • Set and maintain a consistent bedtime across weekdays and weekends. • Prioritise your toddler’s sleep over other activities – practise good time management to ensure there is enough time for bedtime routine and that the toddler gets the recommended number of hours of sleep. • Provide a conducive sleep environment that is dark, quiet and of comfortable temperature. • Keep the bed only for sleep and rest. • Avoid stimulating and vigorous activities such as exercise and consumption of caffeinated food (e.g. soft drinks, chocolates) or beverages before bedtime. • May consider providing the toddler with an item that the toddler feels secure with (e.g. a favourite pillow, blanket or stuffed toy).
Preschooler	<ul style="list-style-type: none"> • Develop a bedtime routine that involves a wind-down period. • Avoid screen time 1 hour before sleep. • Set and maintain a consistent bedtime across weekdays and weekends. • Prioritise your preschooler’s sleep over other activities – practise good time management to ensure there is enough time for bedtime routine and that the preschooler gets the recommended number of hours of sleep. • Provide a conducive sleep environment that is dark, quiet and of comfortable temperature. • Keep the bed only for sleep and rest. • Avoid stimulating and vigorous activities such as exercise and consumption of caffeinated food (e.g. soft drinks, chocolates) or beverages before bedtime. • Be a sleep role model for your preschooler, i.e. sleep sufficiently yourself, during sleep time phones should be on silent mode, switched off, or not be brought into the bedroom.

Resources

Helping infant sleep

1. <https://www.healthhub.sg/live-healthy/1660/helping-baby-sleep>
2. <https://www.healthxchange.sg/news/bedtime-options-for-babies>
3. <https://polyclinic.singhealth.com.sg/Documents/GoodSleepHabitsBabies.pdf>
4. <https://www.healthhub.sg/live-healthy/1195/baby-time-to-unwind>
5. <https://www.healthhub.sg/live-healthy/1936/how-can-i-get-my-baby-to-sleep-well-and-safely>

Tips on good sleep

1. <https://www.healthhub.sg/programmes/117/goodsleep>

Eating Habits and Diet


Parents, caregivers, and teachers can help young children to meet the eating habits and diet recommendations. Consider the following:

Nutrition for Breastfeeding Mothers

It is important to have a nutritionally-balanced diet, and of adequate portions, as this may affect the quality and quantity of breastmilk. Nutritional requirements during breastfeeding can be found on:

- a. Integrated Maternal and Child Wellness Hub (SingHealth Polyclinics) web link:
 - <https://polyclinic.singhealth.com.sg/Documents/NutritionDuringBreastfeeding.pdf>
- b. SingHealth YouTube channel web link:
 - https://www.youtube.com/watch?v=NXEDiK0D0Is&list=PLwKZdOHmwfHG_SfEKdpApjarcQEv rXKbY&index=7

Nutrition for Young Children

Nutrition-related information for parents	For information on breastfeeding, childhood nutrition and recipes according to various age groups. It includes other information on general care, growth and development, sleep and activity, as well as parenting tips. Web link: <ul style="list-style-type: none">• https://www.healthhub.sg/programmes/183/parent-hub• https://www.youtube.com/watch?v=Zu-0WnjRzA8&list=PLwKZdOHmwfHG_SfEKdpApjarcQEv rXKbY&index=8	Search in browser: “Parent Hub HPB” “SingHealth Baby Feeding Tips”
Early Childhood Nutrition	For information on early nutrition according to the following age groups: <ul style="list-style-type: none">- 0 to 4 months- 4 to 6 months- 6 to 12 months- 12 to 24 months	QR code: 

	<p>Resource guides include recommended amount for each food group per day and recipes.</p> <p>Contact of helplines and support groups available.</p>	
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